REMARKS

1. Summary of the Office Action

Claims 1-3 stand rejected under 35 U.S.C 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention.

Claim 1 stands rejected under 35 U.S.C 102(e) as allegedly being anticipated by U.S. Patent 6,405,256 (hereinafter "Lin").

Claims 2 and 3 stand rejected under 35 U.S.C 103(a) as allegedly being unpatentable over Lin.

2. Response to U.S.C. 112 Rejection

Reconsideration of this application, as amended, is respectfully requested. Claim 1 has been amended to obviate the rejection under 35 U.S.C. 112, second paragraph. The claim as amended clearly recites the subject matter that is patentable over the cited references. The amendment is supported by the specification as filed. Accordingly, no new matter is added.

3. Response to U.S.C. 102(e) Rejection

The Examiner has rejected claim 1 under 35 U.S.C. 102(e) as being anticipated by Lin. The rejection is respectfully traversed for the reasons set out below.

To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Each and every element of the present claims is simply not found in Lin. Claim 1, as amended, requires that the "effective serving rate is increased for a time period comprising a

round-trip time interval for a packet transmitted in the network." Lin fails to teach this requirement. Indeed, Lin only describes that if "the expandable buffer has used all of the excess or available memory in CS_M, a message or indication is sent to the upstream device, for example, caching server level M-1 (hereafter CS_{M-1}) to cease further data segment streaming, as depicted in step 216. Similarly, the upstream device could be the network server. Thereafter, CS_M periodically checks for network congestion between CS_M and CS_{M+1} in step 218. If network congestion exists in the connection between the CS_M and CS_{M+1}, CS_M continues in a non-data segment receiving mode and returns to step 216. If network congestion does not exist, a message or indication is sent to CS_{M-1} to begin data segment streaming again, as indicated in step 220" (Lin, Col. 8 line 66 – Col.9 line 10, emphasis added; Figure 4).

Therefore, Lin discloses that the buffer size is increased for a period that comprises the time required for (1) a stop packet request to reach the upper stream node, (2) verifying the status of the congestion, (3) a start packet request to reach the upper stream node, and (4) a data packet to be transmitted from the upper stream node. Indeed, the time period as taught by Lin exceeds the round-trip time interval disclosed in the present invention. In addition, it will be noted that the status of the congestion is verified only periodically which Lin fails to further define. Clearly, Lin is unconcerned if the buffer size is increased for a time period comprising a round-trip interval for a package transmitted in the network.

The Office Action asserts on Page 2, Paragraph 4 that "the stop packet needs a one-way-trip to reach the node CS_{M-1} and the data packet transmitted by the node CS_{M-1} (right before receiving the stop packet) needs another one-way-trip time to reach the congested node CS_M, then it is approximately a round-trip time interval from the time the node CS_M sends a stop packet to the time the node CS_M receives the last packet from the node CS_{M-1}". This assertion is incorrect as it fails to take into consideration the time required for (1) verifying the status of the congestion, (2) the start packet request to reach CS_{M-1}, and (3) the data packet transmitted by CS_{M-1} after receiving the start packet request. As established above, the time period taught by Lin clearly exceeds a round-trip time interval for a package transmitted in the network.

There is no evidence that Lin teaches the presently claimed feature of the "effective serving rate is increased for a time period comprising a round-trip time interval for a packet transmitted in the network" (Claim 1) and therefore, the present claims are patentable over Lin.

4. Response to U.S.C. 103(a) Rejection

Claims 2 and 3 were rejected under U.S.C. § 103(a) as being unpatentable over Lin. These rejections are respectfully traversed for the reasons set out below.

Claims 2 and 3 depend from claim 1, which Lin fails to anticipate. Indeed, as established above, Lin fails even to suggest the concept of increasing an effective serving rate for a time period comprising a round-trip time interval for a packet transmitted in the network as recited in claim 1. Consequently, because Claims 2 and 3 depend from claim 1, there can be no conclusion of obviousness with respect to these claims.

In addition, regarding claims 2 and 3, the Office Action concedes that Lin fails to teach or suggest an auxiliary storage area for storing packets that would otherwise be stored in a queue at the router. In an attempt to cure this deficiency, the Office Action suggests that it would have been obvious to a person of ordinary skill in the art to configure a disk memory as an auxiliary storage area for storing packets that would otherwise stored in a queue. This conclusion finds no support in the reference. Indeed, the Office Action cites no motivation for such a modification, other than a general desire to prevent waste of resources. This rote invocation of a general desire to make existing technologies better is an insufficient basis for reaching a conclusion of obviousness. Instead, what is needed is an actual showing of motivation to make the desired modification.

It will also be noted that Lin fails to expressly disclose an auxiliary storage area for storing packets that would otherwise be stored in a queue at the router and instead discloses that each caching server includes an expandable buffer (Lin Col.4, lines 30-33). Having an expandable buffer is exactly the opposite of having an external storage area.

Hence, there is no evidence that Lin teaches or suggests the presently claimed feature of "the auxiliary storage area is associated with a physical storage device external to the router" (Claim 3). For at least the foregoing reasons, the present rejections should be removed.

5. Conclusion

Having tendered the above remarks and amended the claims as indicated herein, the Applicant respectfully submits that all rejections have been addressed and that the claims are now in a condition for allowance, which is earnestly solicited.

If there are any additional charges, please charge Deposit Account No. 02-2666. If a telephone interview would in any way expedite the prosecution of the present application, the Examiner is invited to contact Tarek Fahmi at (408) 947-8200 ext. 219.

Respectfully submitted,

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